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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,902	07/10/2003	Jun Zhao	A7206/T47300	4081

7590 05/07/2004

APPLIED MATERILES, INC.  
Patent Counsel, M/S 2061  
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P.O. Box 450A  
Santa Clara, CA 95052

EXAMINER

JIANG, CHEN WEN

ART UNIT	PAPER NUMBER
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3744

DATE MAILED: 05/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/617,902	ZHAO ET AL.	
	Examiner	Art Unit	
	Chen-Wen Jiang	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20 and 24-32 is/are allowed.
- 6) ☒ Claim(s) 1,3,5,6,13,14,16,17 and 19 is/are rejected.
- 7) ☒ Claim(s) 2,4,7-12,15,18 and 21-23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>20030710</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Specification*

1. Claim 17 is objected to because of the following informalities: "convention" should be changed to --convection--. Appropriate correction is required.
2. Claims 21-23 are objected to because of the following informalities: Claim 21 probably should be depended on claim 20. Appropriate correction is required. The Examiner assumes claim 21 depends on claim 20 in this Office Action.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1,3,5,6,13,14,16,17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark (U.S. Patent Number 5,993,053) in view of Hoisington et al. (U.S. Patent Number 4,814,786) or Khijniak et al. (U.S. Patent Number 5,823,676).

In regard to claims 1,13,16,17 and 19, Clark discloses an apparatus and method for convective stirring of finely divided particles. Referring to Figs.1-7, a reservoir 10 containing toner 15 and a heating element 20 located within the reservoir. Toner 15 contains particles which would normally settle to the bottom of reservoir 10 and other agents which do not settle but remain in solution in the liquid vehicle. Convective flow in fluid 15 entrains colloidal particles and other dissolved agents and causes them to uniformly disperse in the fluid 15, thus rendering the fluid 15 homogeneous and capable of making uniform prints. The heater 20 may be inside or

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outside the reservoir 10 and may comprise separate heaters, alternately or simultaneously energized (individually controlled). However, Clark does not explicitly disclose a delivery system. Hoisington et al. and Khijniak et al. disclose a delivery system associated with the mixing fluid in the same field of endeavor for the purpose of delivering mixed fluid. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Clark with a delivery system in view of Hoisington et al. and Khijniak et al. so as to deliver the mixing fluid. The particles are dielectric.

In regard to claim 3, Hoisington et al. disclose an insulation material around the reservoir.

In regard to claims 5 and 6, it is well known that the heater and cooler are interchangeable in the refrigeration system.

In regard to claim 14, the arrangement of the heating/cooling elements are design choice and not patentable.

***Allowable Subject Matter***

5. Claims 20 and 24-32 are allowed.
6. Claims 2,4,7,8,9,10-12,15 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chen-Wen Jiang whose telephone number is (703) 308-0275. The examiner can normally be reached on Tuesday-Friday from 7:00 to 5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Denise Esquivel can be reached on (703) 308-2597. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chen-Wen Jiang  
Primary Examiner

A handwritten signature in black ink, appearing to be 'CW Jiang', written in a cursive style.